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Phasing out fossil fuel subsidies

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Subsidy examples

Coal mining

direct transfers, little liability for damage

Fishing

Grants, guarantees, tax exemptions + no liability for damage to sea bed et al

Water use

Non resource pricing

Deforestation

– no resource costs, no compensation for damage

Agriculture

Direct payments + no liability for eutrophication damage et al

Energy: oil spills

Only partial liability / compensation for damage

Global subsidies

Water
(under-pricing & irrigation)
$200-300(?) bn/year
ES $1 bn; USA >$0.5 bn

Fisheries
$15-35 bn/year
25 % sector income
$50 bn/year ↓ resource

Fossil fuels
$400-700 bn/year
mainly consumption
production >$100 bn
(IMF-estim. $ 1900 bn)

Biofuels(+/-?)
>$20 bn/year
mainly industrialised
increasing

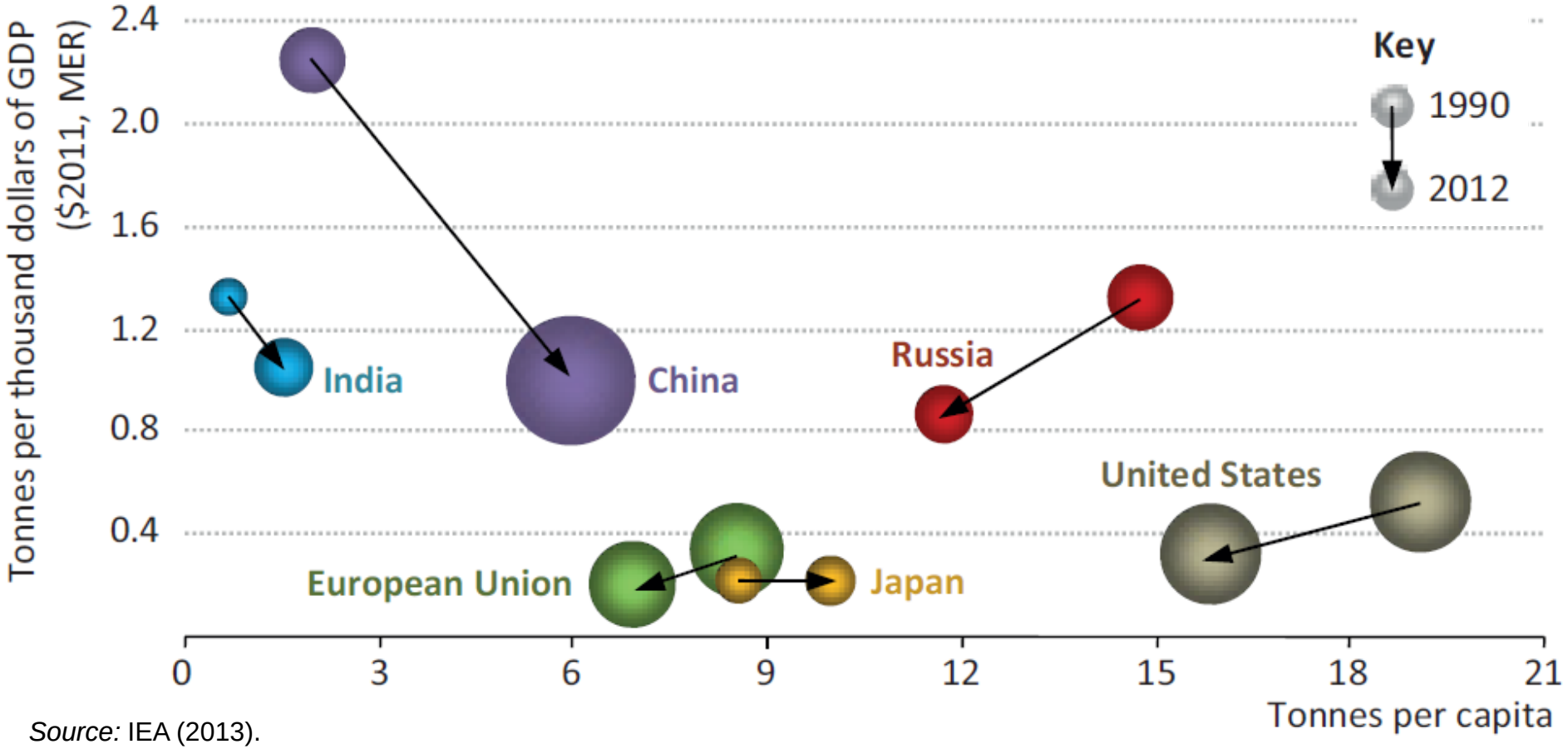
Nuclear energy
magnitude?

Agriculture
Production $252 bn (OECD, 2011)
Total $407 bn (OECD, 2011)
Increase production in industrialised countries

- **Total support over $ 1100 bn**
- **per year**

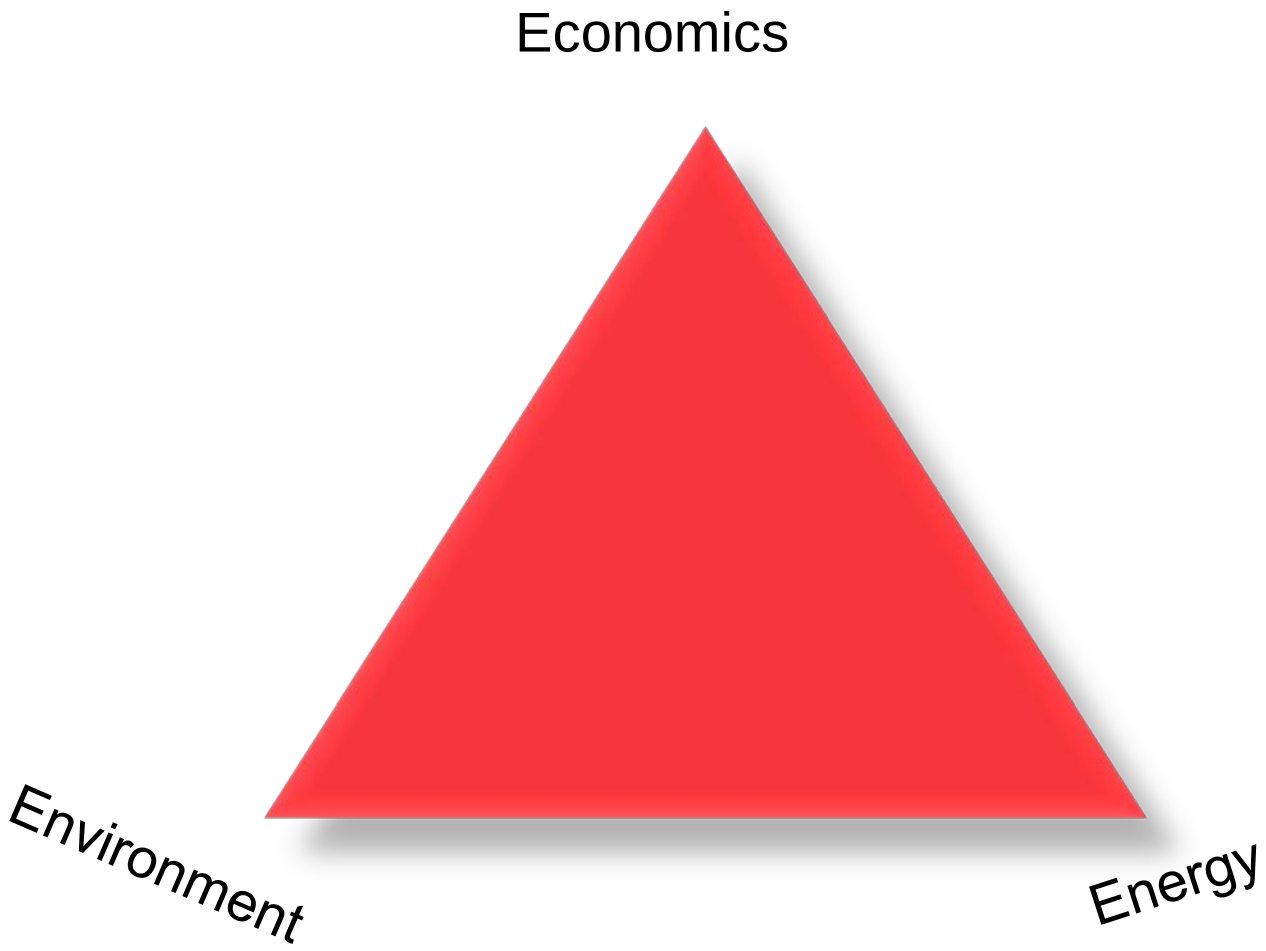
Sources: IISD-Global Subsidies Initiative, OECD, IMF.

Energy-related CO2 emissions per capita and CO2 intensity in selected regions

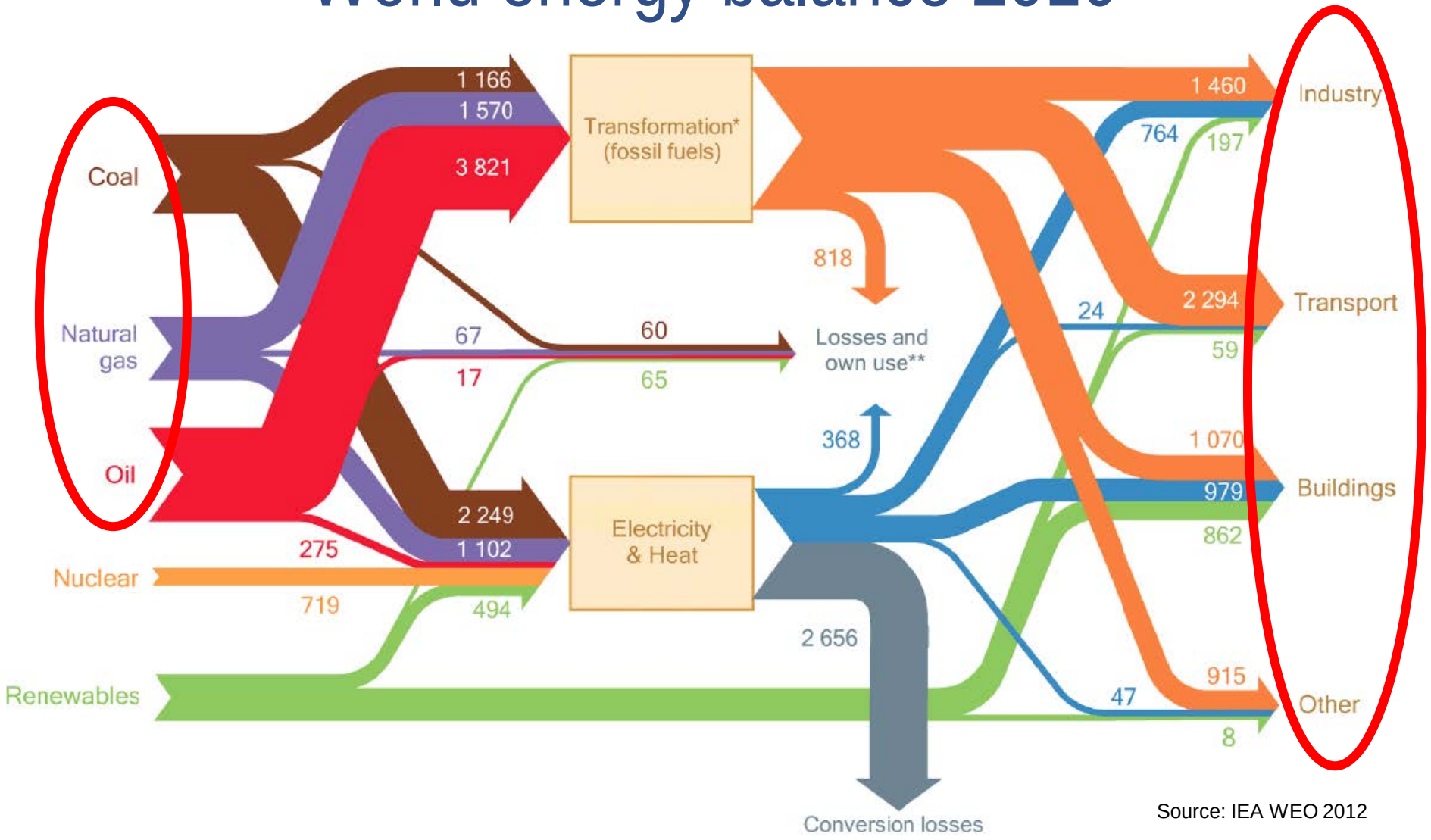


Source: IEA (2013).

Energy policy: objectives



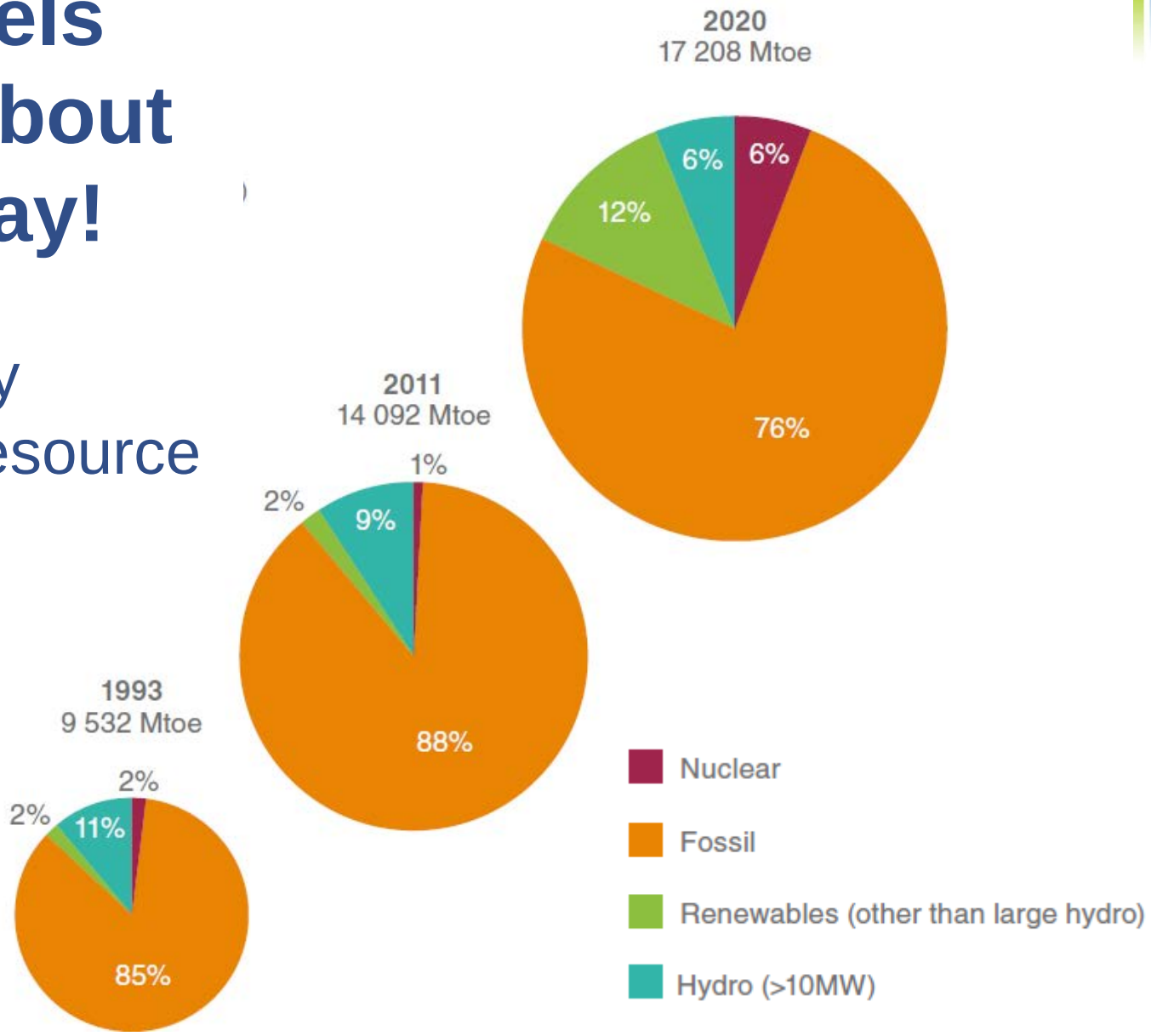
World energy balance 2010



Source: IEA WEO 2012

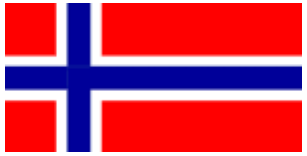
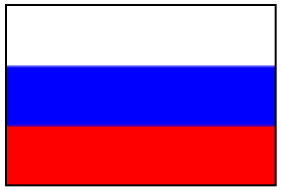
Fossil fuels are not about to go away!

Total primary energy by resource



Source: WEC (2013).

Support to oil and gas production

Example	No. of measures	Total	Year
	3 (+7)	$ 1.8 bn	2008
	63	$ 2.8 bn	2008
	3 (+6)	$ 4.0 bn	2010
	30	$ 14.4 bn	2010

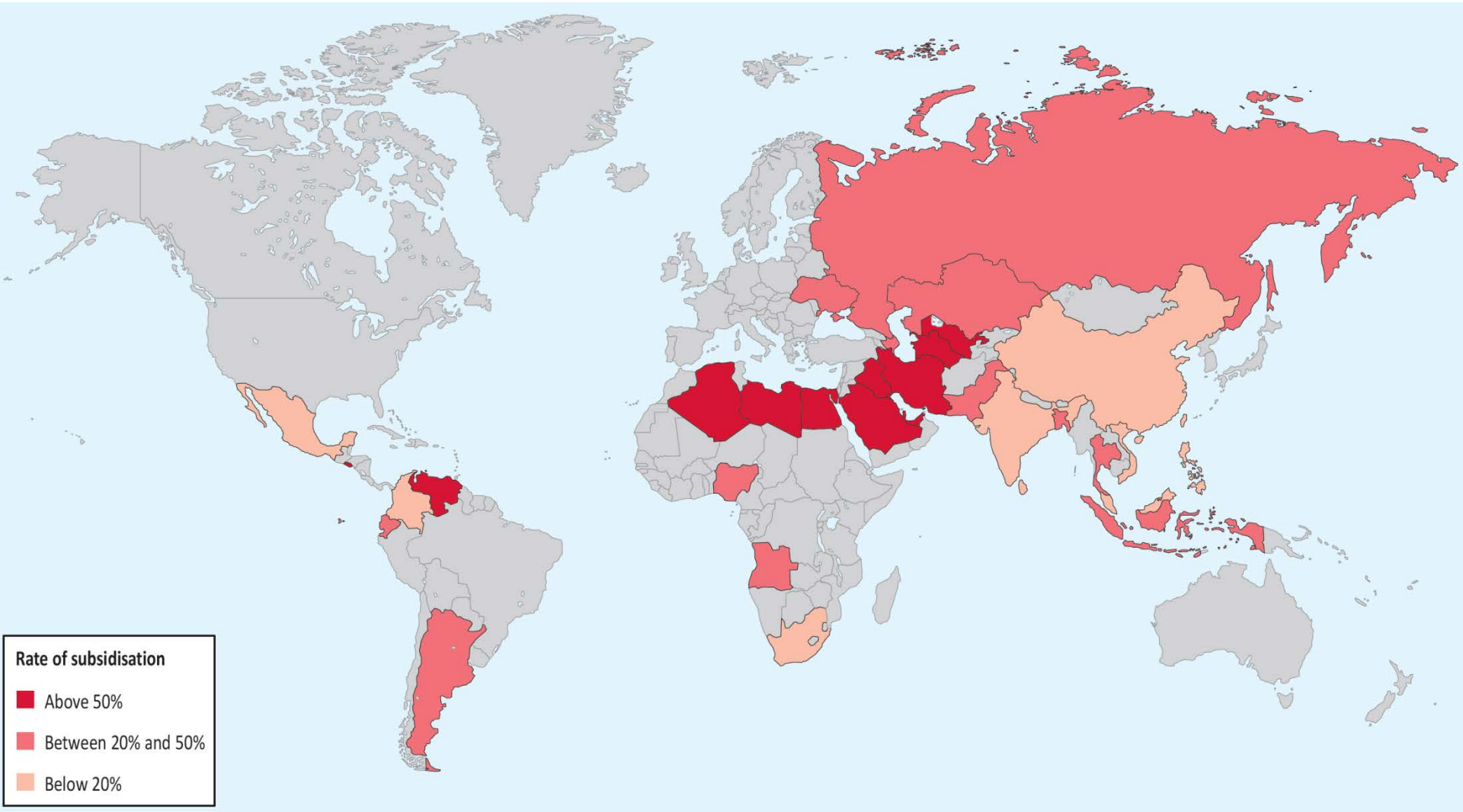
Source: IISD-Global Subsidies Initiative; www.iisd.org/gsi.

Fossil fuels vs. renewables
2007-2010, $ bn. (IEA estimates)

	2007	2008	2009	2010
Fossil fuel (consumption subsidies)	**342**	**554**	**300**	**409**
Oil	186	285	122	193
Gas	74	135	85	91
Coal	0	4	5	3
Electricity (produced with fossil fuels)	81	130	88	122
Renewable energy	**39**	**44**	**60**	**66**
Biofuels	13	18	21	22
Electricity	26	26	39	44

Source: IEA, 2011.

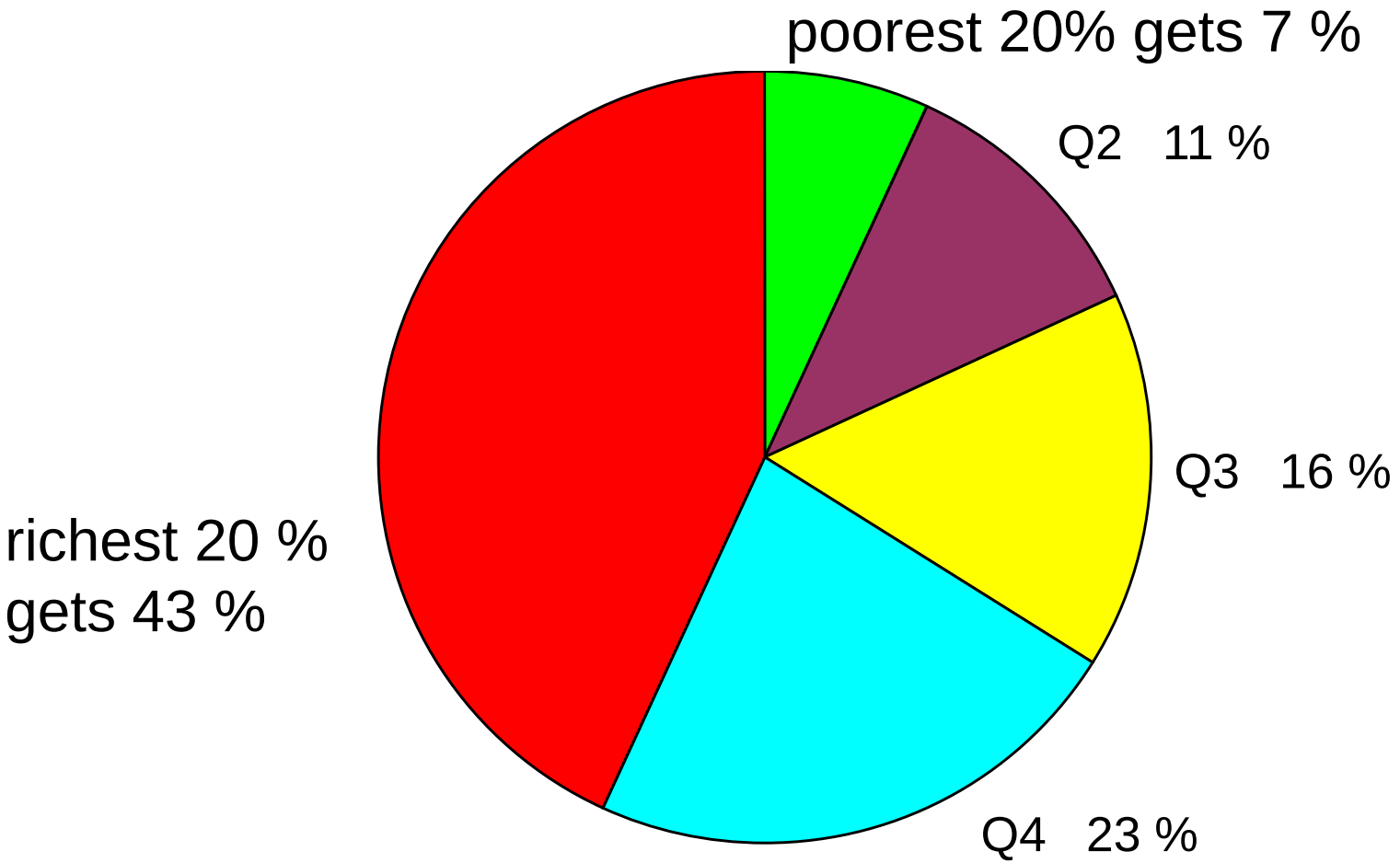
Fossil fuel consumption subsidies (%, 2010)



IEA, 2011.

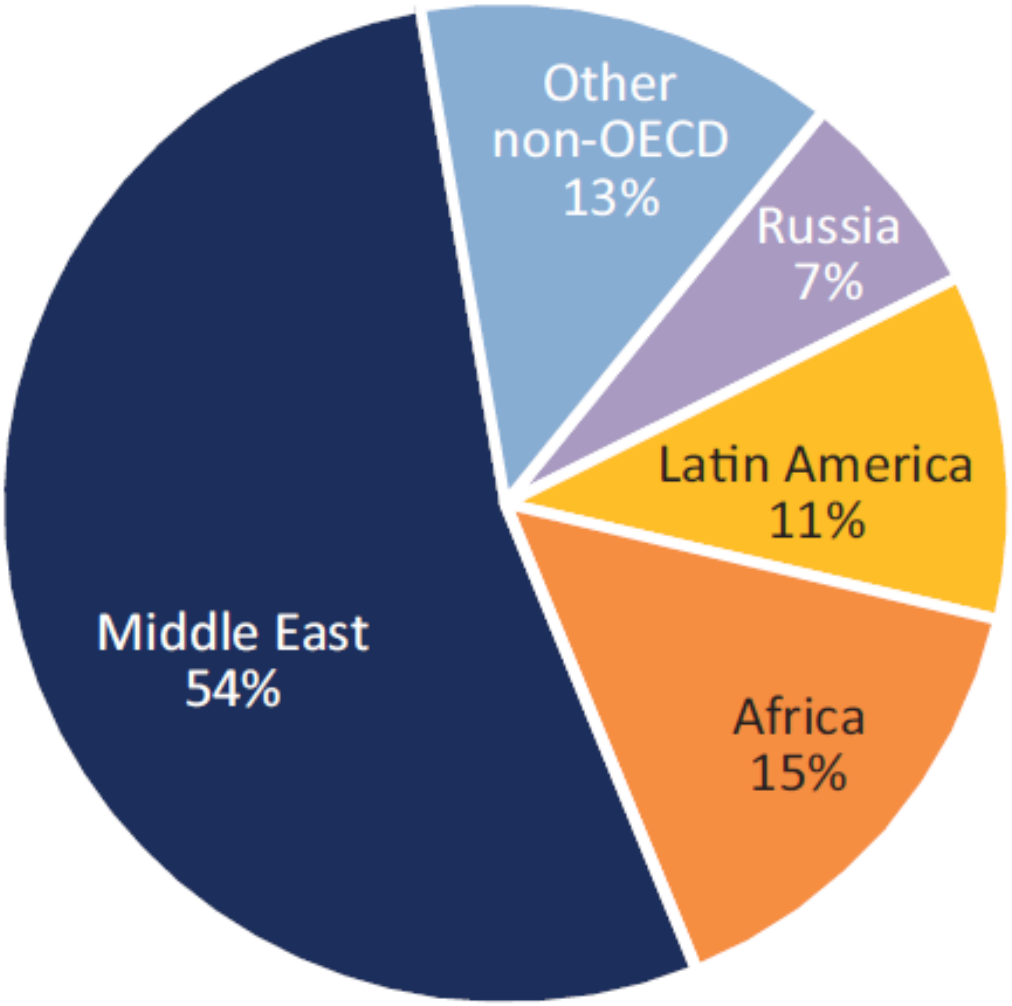
Fossil fuel subsidies benefit the rich

incidence by income group in 33 countries



Source: IEA, 2011.

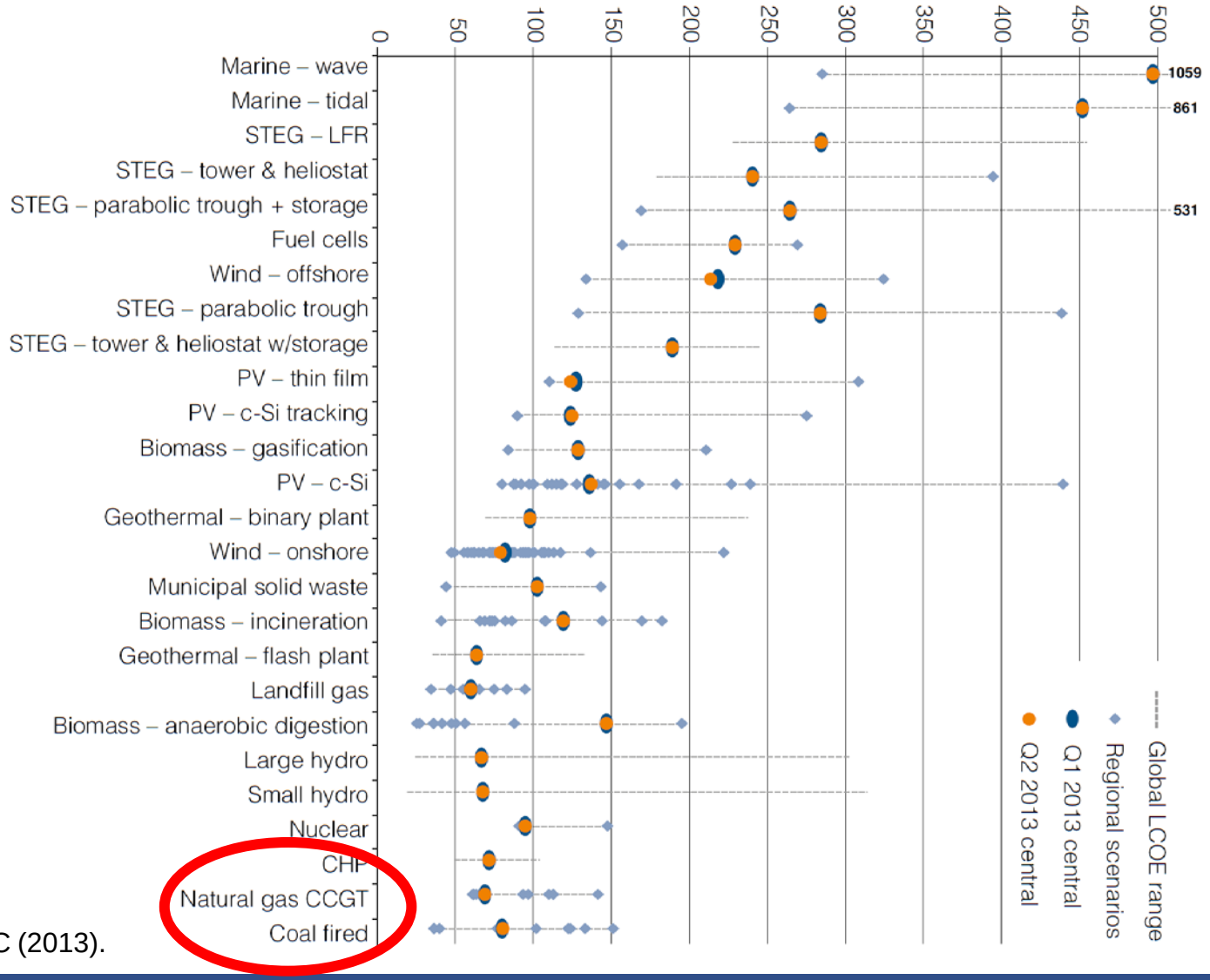
Change in world CO2 emissions through fossil fuel subsidy reform (IEA 2020 scenario)



Savings: 360 Mt

Source: IEA (2013).

Global levelised cost of electricity, USD/MWh (Q2/2013)



Source: BNEF; WEC (2013).

Classifying subsidies

#	Economic type	Specific subsidy type covered
On-budget subsidies		
1	**Direct transfer of funds**	Direct transfer of funds
		Potential direct transfers of funds, e.g. covering liabilities
2	**Provision of goods or services (other than infrastructure)**	Government provides goods or services other than general infrastructure
		Government directs other bodies to do any of the above
Off-budget subsidies		
3	**Income or price support**	Income or price support
4	**Foregone government revenues**	Government revenues due are foregone or not collected, e.g. tax credits
		Tax exemptions and rebates
		Accelerated depreciation allowances
5	**Preferential treatment**	Preferential market access
		Regulatory support mechanisms
		Selective exemptions from government standards
6	**Provision of infrastructure**	Implicit subsidies, e.g. resulting from the provision of infrastructure
7	**Lack of full cost pricing**	Implicit income transfers resulting from a lack of full cost pricing
		Implicit income transfers resulting from non-internalisation of externalities
		Resource rent for foregone natural resources

How to reform?

Timeline

€ $ £ ¥ ?	**Slow**	**Fast**
Yes	***Cash-out***	***Buy-out***
No	***Squeeze-out***	***Cut-out***

Objectives vs. reality

- Subsidies launched with good intentions
  - Food production (EU CAP)
  - Energy security, diversification (peat, coal)
  - Technology/industry support (renewables)
  - Competitiveness (energy tax exemptions)
  - Social & poverty issues (fossil fuels, electricity)
  - Climate policy (biofuels & renewables)
  - Environmental concerns
- Objectives can become outdated (self-sufficiency)
- Objectives can differ from actual impacts (biofuels)
- Instrument can be wrong or badly designed
- Unforeseen environmental impacts
- Slows down structural change

Assess subsidies to identify

the good

- relevant, targeted, effective, positive impacts, few negative effects

the bad

- no longer relevant, waste of money, important negative effects

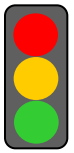
the ugly

- Badly designed, inefficient, badly targeted, potential for negative effects

Develop a road map for subsidy reform

OECD/EU assessment tool (*)

I. Screening of subsidies
II. Potential for reform
III. Wider assessment
IV. Opportunities for action



➢ **Political will, courage, decision!**

(*) EU study (2010): Environmentally Harmful Subsidies: Identification and Assessments

I. Initial screening	II. Assessment tool	III. Wider assessment	IV. Reform opportunities
1. Does the subsidy exist?	1. Does support increase production?	1. Policy objectives?	1. What can be done?
2. Does it affect the environment?	2. Do other policies limit environmental impacts?	2. Are the set objectives met?	2. Costs and benefits of different options?
3. Sectoral importance?	3. Are more environmentally friendly options available or being developed?	3. Is it cost effective?	3. Who lose? Is it possible to compensate?
4. Ecocomic and social importance?		4. What are its economic, social and other impacts?	4. Factors affecting success
5. Reform barriers?		5. What are the long term impacts?	
6. Data availability?			

Will subsidy reform benefit the environment?

1. Conditionality leads to higher production?
   No →
   ↓ **Yes**
2. Policy filter limits environmental damage?
   Yes →
   ↓ **No**
3. More benign alternatives available or emerging?
   No →
   ↓ **Yes**

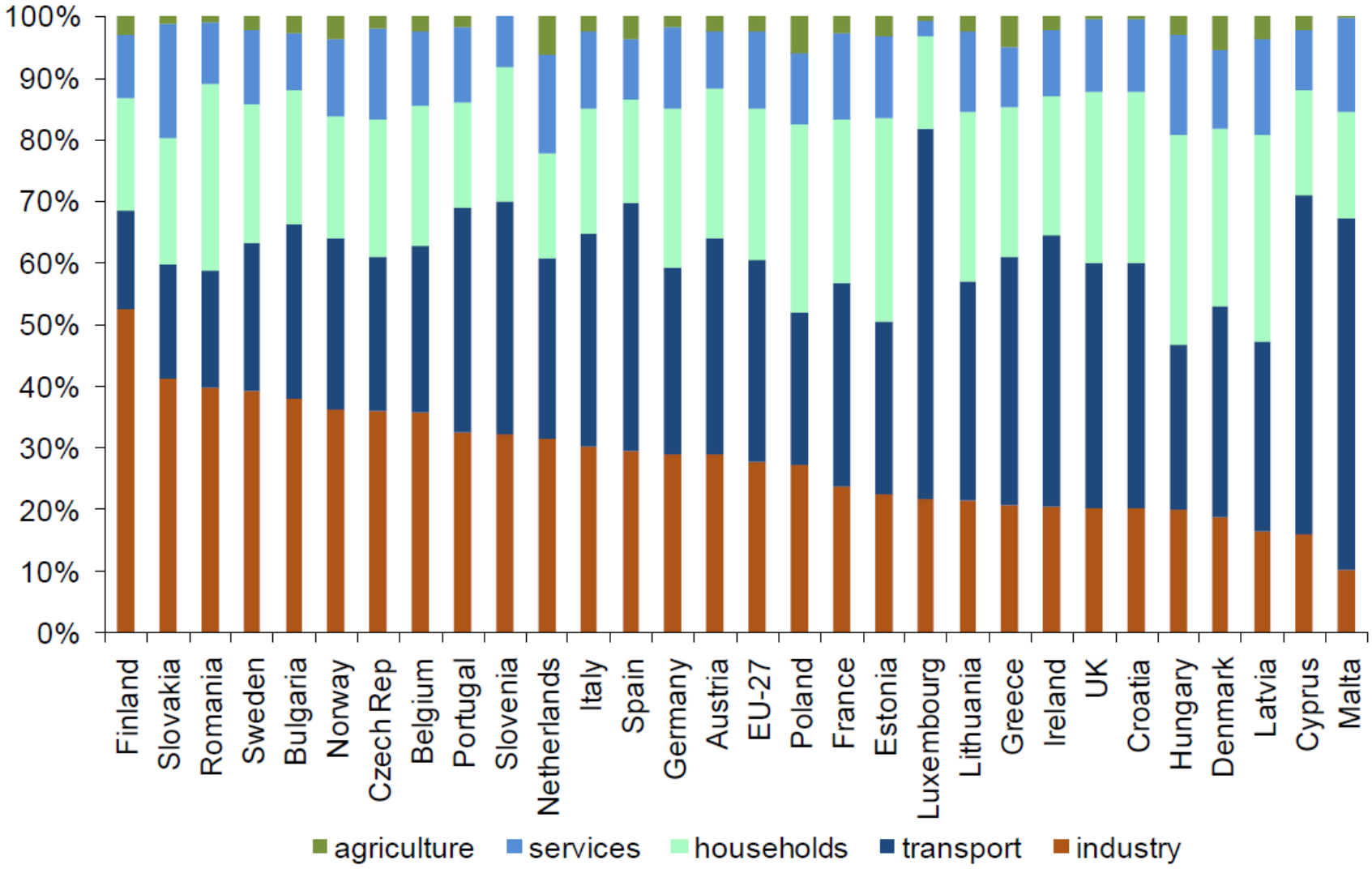
Reform not likely to benefit the environment

➢ **Reform will likely benefit the environment**

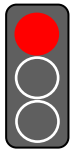
Assessment of environmentally harmful subsidies in Finland

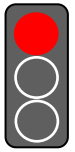
- 1. systematic assessment
- All support measures
  - Incl. EU-wide measures (e.g. ETS)
  - Measures with indirect environmental impact
- Tax support, exemptions, budget support etc.
- 2009 – 2012
- 400 measures, 50 analysed in detail
- Potentially harmful subsidies in energy, transport and agriculture
- Tax support dominate in energy and transport

Energy intensity (consumption by sector)

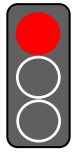


Energy sector

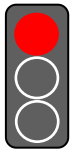




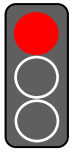
- **Tax rebate (energy intensive industry)**
- **Lower tax rate applied to industry and greenhouses**



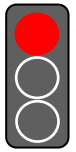
- **Lower tax rate for peat**



- **Free allocation of emission permits in EU ETS**

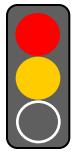


- **Tax rebate for energy use in agriculture**

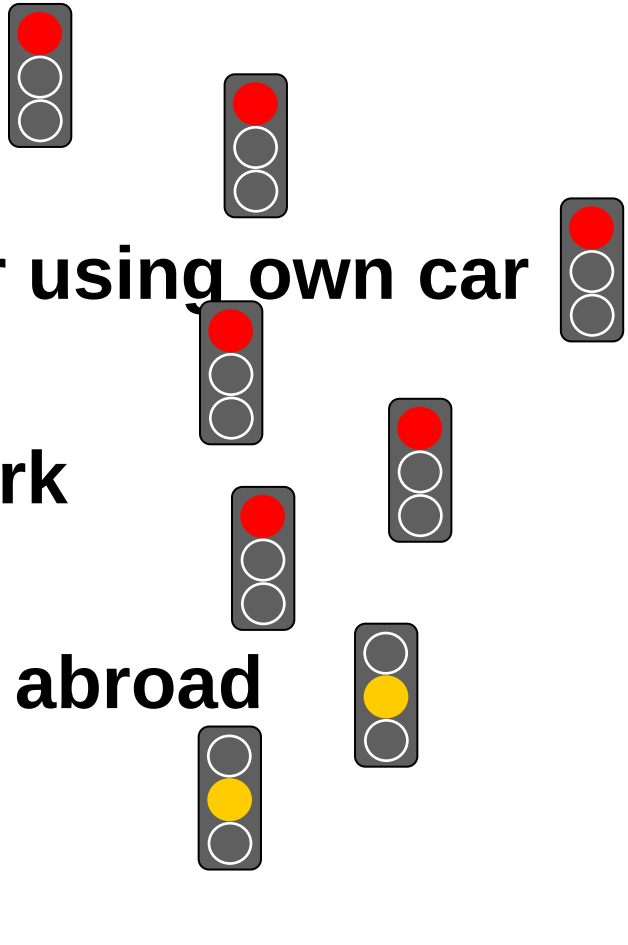


- **Total > 800 million € /year**

Transport



- **Diesel vs. petrol**
- **Machinery**
- **Compensation for using own car**
- **Free parking**
- **Commuting to work**
- **Company cars**
- **Tax when moving abroad**
- **Camper vans**
- **Taxis**
- **Total > 1,8 bn**



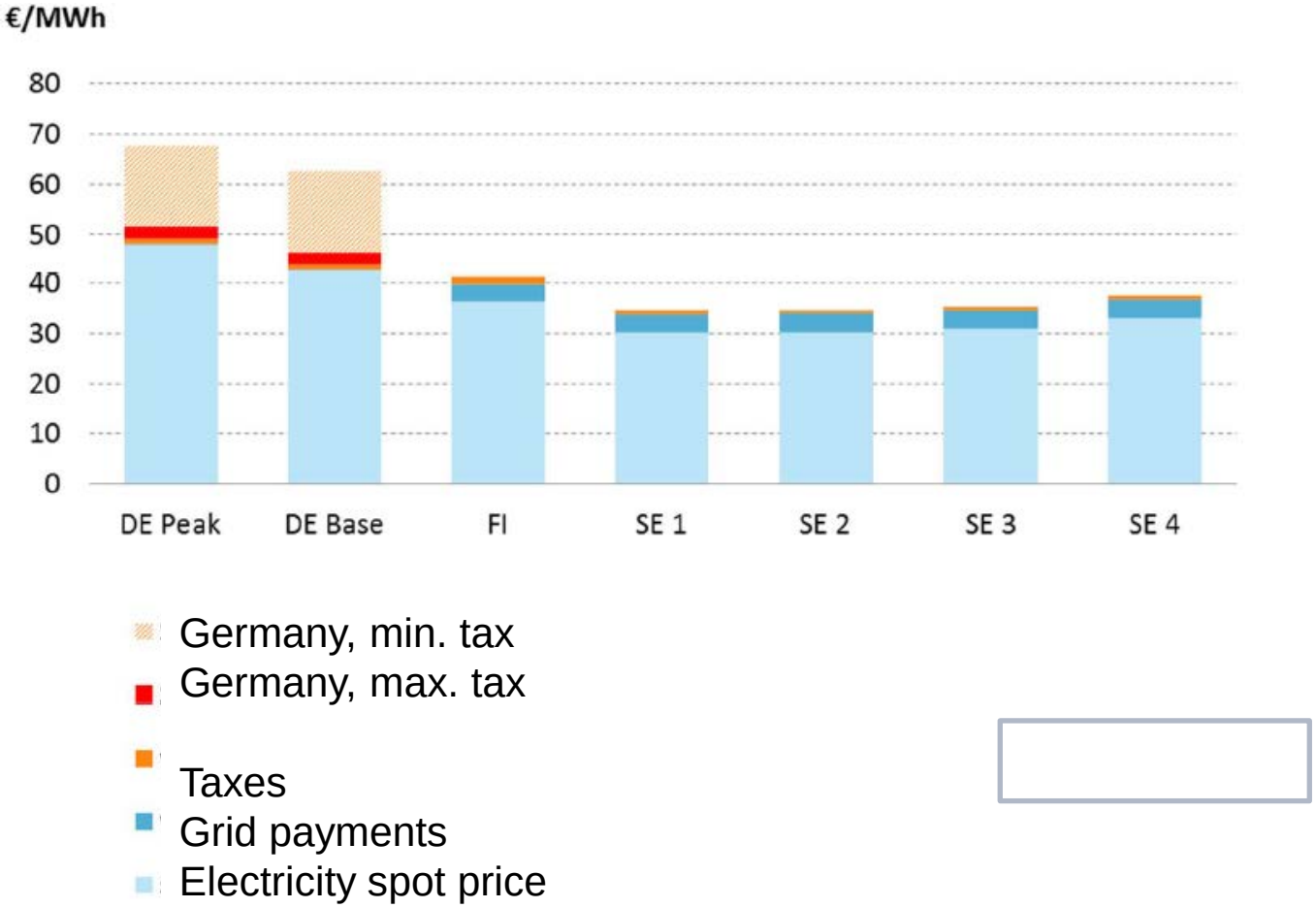
Observations

- Externalities, regulations, hidden support?
- No environmentally harmful budget support
- Mainly tax support or rebates (diffucult to quantify and assess impacts)
- Some potentially harmful subsidies could be reformed at national level
- Changes to biggest subsidies should be done at global or at least EU level (competitiveness, carbon leakage etc.)

Observations (2)

- Correlation between tax rate and harmful subsidies → countries with higher taxes have more subsidies
- International comparisons difficult
  - SE study: ETS free allocation excluded
  - DE study: EU CAP excluded
- EU ETS: full auctioning 2027 → partial pricing
- Environmental impacts often not assessed
- Subsidies need to be assessed together with other policy measures

Major industry: electricity price *



* 2012 consumers >100 GWh/year.

Source: Pöyry

Observations (3)

- Environment angle is narrow, reform can have wider economic and social benefits
- Subsidy can seem wasteful even when not damaging the environment
- Reform can free resources than can be directed to other policy priorities
- Also ”green” subsidies can be badly designed, poorly targeted, costly and cause market distortions!

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Thank you!

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